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# Dispelling stigma and enduring bias: exploring the perception of esports participation among young women

Di Tang<sup>1</sup>, Bo Peng<sup>1</sup>, Ruisi Ma<sup>1,2</sup> & Kim-wai Raymond Sum<sup>1</sup>  <sup>✉</sup>

This study examined how female players engage with Honor of Kings (HOK), a mobile Multiplayer Online Battle Arena (MOBA) game, focusing on the facilitating and inhibiting factors shaping their participation in this traditionally male-dominated domain. Semi-structured interviews were conducted with 31 female players (aged 18–29). The analysis primarily focused on how social factors, attitudes, and perceived behavioral control influence their gaming experience in HOK. Additionally, thematic analysis was utilized to explore themes related to the experiences of female participation in HOK, societal perceptions of esports, gender biases, and online toxicity. The results indicate that HOK has successfully broadened female participation in esports through social media integration and esthetic appeal. However, traditional cultural norms and masculine gaming culture, manifested in gender discrimination and online harassment, significantly challenge women's inclusive participation in the esports ecosystem. This study is the first to explore women's experiences as primary players in mobile esports, providing fresh insights into gender dynamics in esports. The research expands understanding of the relationships between game design, social integration, and cultural barriers in esports participation.

<sup>1</sup>Department of Sports Science of Physical Education, The Chinese University of Hong Kong, Hong Kong, China. <sup>2</sup>School of Physical Education, Jinan University, Guangzhou, China. ✉email: [kwsun@cuhk.edu.hk](mailto:kwsun@cuhk.edu.hk)

## Introduction

**Esports field.** The esports industry has experienced exponential growth since 2010, driven by an expanding player base, increasing viewership, and technological advancements (Block and Haack, 2021, Hamari and Sjöblom, 2017). Moreover, there is a global imbalance in esports development, with Asia, particularly South Korea, China, and Southeast Asia, emerging as a significant market (Taylor, 2012). Within this global landscape, China has established itself as a global leader in the esports industry, offering a unique and valuable research context (Zhao and Lin, 2021). In 2016, China became the world's largest digital gaming market, coinciding with the expansion of Chinese digital platforms and esports' growing popularity (Yu, 2018). The Chinese government's early recognition of esports as an official sport in 2003 has facilitated nearly two decades of rapid development, resulting in China now having the world's largest esports audience of 163 million viewers (Li et al. 2024, Yu, 2018). Numerous studies have documented China's esports evolution, examining policy changes, the emergence of local professional clubs, and the integration of international expertise (Seo, 2013, Xu, 2012, Yu, 2018, Skubida, 2016). Since officially recognizing esports as a sport in 2003, China has systematically developed the sector through university degree programs and a national esports athlete development system parallel to traditional sports (Lu, 2016). Majors such as Esports Management and Esports Commentary have been established in many mainland Chinese universities, which will provide a talent foundation for the professionalization and specialization of China's esports industry. Additionally, The State General Administration of Sport's integration of esports into its athletic training framework, combined with strong market growth and cultural embrace, demonstrates China's comprehensive approach to esports professionalization (Peng, 2021). The market's growth, characterized by increasing participation and significant investor interest, mirrors other sports industries in their early stages. This unique combination of government support, market growth, and cultural embrace makes China an invaluable subject for esports research.

Despite the industry's rapid advancement, a significant gap exists between practical developments and theoretical understanding. Analysis of academic literature reveals fewer than 200 esports-focused articles across research domains through March 2020 (Chiu et al. 2021). However, despite this increase, the depth and breadth of esports research remain insufficient (Reitman et al. 2020). This disparity between industry growth and academic research underscores the necessity for rigorous scientific investigation to advance understanding of esports' social impacts and future trajectory.

Additionally, the legitimacy of esports continues to evolve through institutional recognition, and academic debates around its definition and official status persist (Hallmann and Giel, 2018, Parry, 2021, Leis et al. 2021, Tang et al. 2023b). Nonetheless, the recognition of esports as a sport in several countries and its consideration in about forty others, coupled with its inclusion as a medal event in the Asian Games in 2023 and the International Olympic Committee's positive stance, signal its ascending legitimacy (Weiss, 2008, International Esports Federation, 2017, Asian Electronic Sports Federation, 2019).

**Gender issues in esports.** While the esports industry has achieved remarkable growth and increasing legitimacy, this rapid development has also highlighted significant structural challenges. One of the most pressing issues is the persistent gender inequality embedded within the ecosystem. Drawing from Allport's foundational work on the nature of prejudice, gender inequality in

esports can be understood as a manifestation of systematic prejudice that has become embedded in gaming culture and competitive environments (Allport, 1954). Brown's research on intergroup prejudice reveals how such phenomena are reinforced and perpetuated through player interactions and community atmosphere in gaming communities (Brown, 2011). Research has consistently demonstrated that the esports domain is characterized by a culture of male-dominated toxicity that undermines its legitimacy and evolution (Smith et al. 2019). A recent report titled "Sexism and Harassment in the Gaming Industry" documented over 70 allegations of sexism and harassment, highlighting the urgent need for the industry to take action to address the toxic culture that pervades it (Lorenz and Browning, 2020). Empirical evidence suggests that female participants in online gaming environments are disproportionately subjected to discriminatory remarks compared to their male counterparts (Cary, 2017). Additionally, the proportion of women and girls who serve as professional esports players or hold senior management positions in the industry remains extremely low, with women facing limited opportunities to participate and encountering additional barriers (Darvin, 2020). Only 35% of esports gamers are female, and men dominate the professional esports scene, with women accounting for only around 5% (Hilbert, 2019, Darvin et al. 2021). This deficient proportion of women in the most popular and commercialized esports games directly affects the career opportunities and prospects for women and girls in the entire industry (Darvin et al. 2021). Women and girls are underrepresented in the highest levels of esports participation and employment, which is often attributed to a lack of interest. However, research suggests these are biased assumptions similar to those made before Title IX in the US, claiming that women and girls lacked interest in sports. After the passage of Title IX, female participation in traditional sports skyrocketed by approximately 1,000%, indicating the existence of barriers and glass ceilings that prevented women from entering or sustaining their involvement in the field rather than a lack of interest (Darvin et al. 2021). Moreover, research indicates a strong correlation between women's underrepresentation in esports and the prevalence of gender-based harassment and toxic behavior they face (Darvin et al. 2021; Ruvalcaba et al. 2018). Studies suggest that the low female participation in esports roles is directly linked to the hostile environment often created by other players (Fox and Tang, 2017). Alarming, such discriminatory behaviors frequently go unchallenged, with some even considering them an acceptable part of gaming culture (Türkay et al. 2020). This normalization of harassment raises significant concerns about equity in esports and underscores the need for effective strategies to create a more inclusive environment for female participants.

The normalization of harassment and its underlying causes has prompted academic exploration of gender issues in esports. In this context, Taylor's research on women's predicament in esports first introduced the concept of geek masculinity into the analytical framework of video games, providing a new perspective for understanding gender imbalance in esports (Taylor, 2012). Geek masculinity is a gendered subjectivity formation in which men claim computer engineers as socially awkward but smart loners, which were internalized and reclaimed by boys and men for whom technology offers an alternate avenue to male identification (Salter, 2018, Ensmenger, 2010). This concept is theoretically rooted in Connell's foundational work on hegemonic masculinity, which examines how certain forms of masculinity achieve and maintain cultural dominance within specific social contexts. Connell's framework emphasizes that masculinities are multiple, hierarchical, and historically contingent, with some forms becoming culturally exalted while others are subordinated

or marginalized (Connell, 2020, 2013). In this theoretical lineage, geek masculinity emerged as a distinct form that challenges traditional hegemonic masculinity while simultaneously reproducing certain patriarchal power relations through technical expertise and digital competence. As Taylor emphasizes, “the construction of masculinity is important to understanding the nature of gender and professional computer gaming”. In geek masculinity, boys and men tend to gain self-esteem and social capital by specializing in technical knowledge or ability rather than conventional indicators of masculinity (e.g., physical capability) (Taylor, 2012). Traditional athletic masculinity and geek masculinity merge in esports to form a new type of hegemonic masculinity, which is also called hegemonic geek/nerd masculinity. It is also regarded as a continuation of toxic gamer culture, “a pattern of a sexist gamer culture and patriarchal privilege striving to (re)assert its position” (Consalvo, 2012).

In the Chinese context, these gender dynamics manifest uniquely due to the intersection of traditional cultural values and rapid digital transformation. While Chinese female gamers face similar challenges of harassment and underrepresentation, research suggests their responses and experiences are distinctively shaped by cultural factors in Chinese society (Liu and Lai, 2022). The rapid growth of mobile gaming in China has created new opportunities for female participation (Le, 2024), potentially challenging traditional gaming masculinities.

**Honor of King.** HOK is a mobile esports game that has achieved significant popularity in Asia, becoming an official medal event at the 2023 Asian Games and featured in the World Cyber Games since 2019. Its mobile platform represents a shift in the esports landscape, paralleled by the recognition of new game forms, such as Mobile Legends: Bang Bang and Just Dance, in official esports competitions (Block and Haack, 2021). As a prominent esports title, HOK embodies the emergent development trends of future esports, particularly in its ability to attract diverse player demographics.

Notably, HOK has attracted an unprecedented female player base in China, with over 100 million female players by 2017, and has spurred professional events specifically for women, such as the Honor of Kings’ Women’s Open (KWO) (Yaqi et al. 2021). This substantial female participation is particularly significant given the historical rarity of female professionals in esports. Just as the inclusion and support for women’s participation have been crucial in traditional sports, the growing female presence in HOK suggests potential pathways for broader gender inclusion in esports.

The upward trend of female gamer participation in HOK bears significant implications for the evolution of esports on a global scale, making it an ideal case study for examining how traditional gender barriers in esports might be evolving in the mobile gaming era. The game’s success among Chinese female players challenges conventional assumptions about gender preferences in competitive gaming and demonstrates the potential for creating more inclusive esports environments. This phenomenon warrants continued investigation and scholarly research, as it carries considerable referential value for understanding and promoting gender equality in the whole esports industry.

This exploration aimed to unravel the intricate nature of young women’s engagement in esports, not merely to account for their underrepresentation but to probe the spectrum of factors influencing their access, motivations, and the roles they assumed within this cultural domain (Nooney, 2013). By delving into the experiences of female players in HOK—an esports title renowned for its substantial female player base in China and even Asia, the study sought to dissect the complex web of hegemonic

masculinity that may shape the esports environment. Moreover, it strove to shed light on how these dynamics affected women’s participation and persistence in gaming and how their feedback might elucidate the broader issue of male dominance in esports. The goal transcended the simplistic quantification of involvement; it aimed to provide a deeper, empirically grounded understanding of the gendered complexities in esports within China’s unique social and cultural context, which is crucial for nurturing a more inclusive and equitable gaming culture. Additionally, the study aimed to explore whether the barriers and challenges women faced in more traditional esports titles were being mitigated in a game with a rising number of female players and whether this reflected a potential shift in the gender dynamics within the esports landscape.

## Methodology

**Research design.** To achieve the research objective and based on the theoretical framework, this study adopted the qualitative method as the main method for data collection and analysis. Qualitative research is descriptive and interpretive, and it focuses on understanding the perceptions of the person from their perspective, paying attention to the person’s mental state and construction of meaning, which fits in with the research objective of this study to explore the perception and experience of esports participation among young women (Creswell and Creswell, 2017).

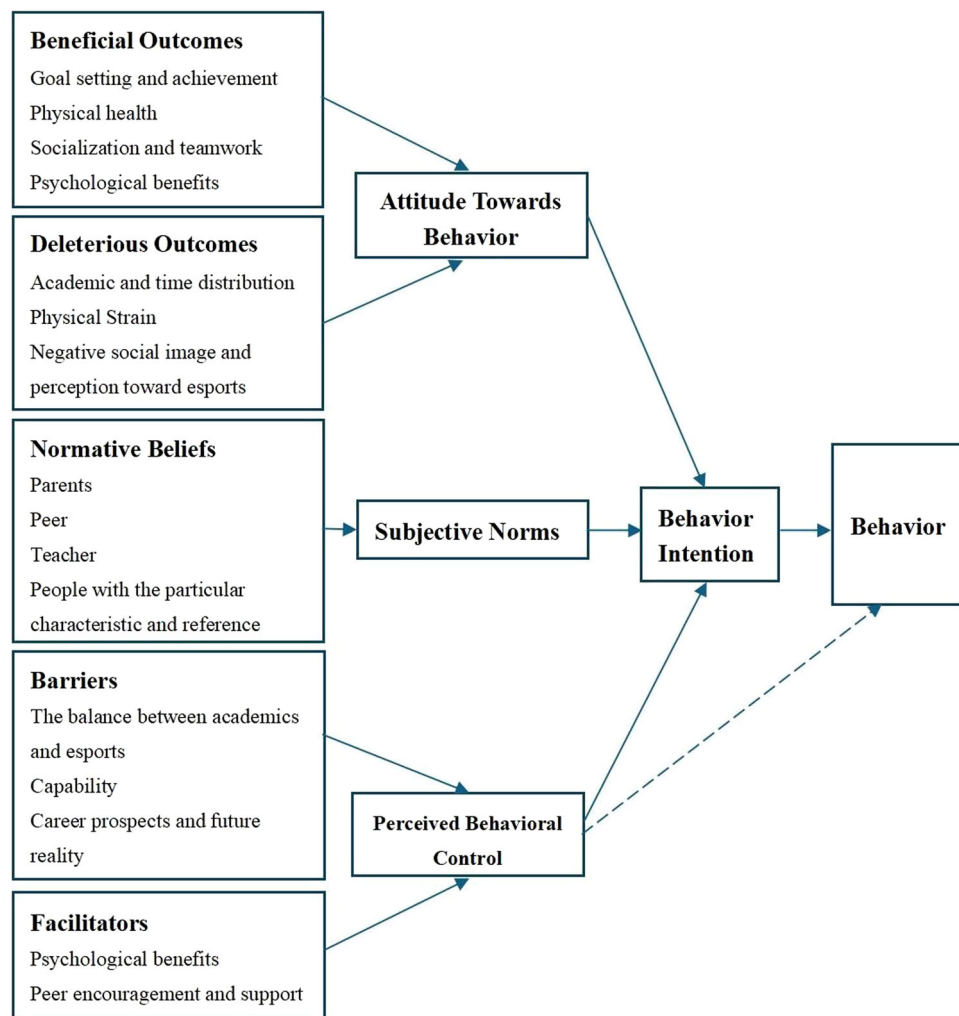
This study employed the Theory of Planned Behavior (TPB) as its methodological foundation to facilitate data collection and establish a preliminary analytical framework. This approach enables comprehensive identification of factors influencing female participation in esports, providing foundational data for subsequent gender-based analysis. The TPB framework, adapted from previous research on Chinese youth esports participation behavior, ensures methodological alignment with our research context and target demographic.

The framework examined behavioral intention through three determinants: attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). Figure 1 presents the basic framework of TPB as applied to esports participation. These determinants were shaped by underlying salient beliefs (behavioral, normative, and control beliefs), offering insights that proved valuable in exploring physical activities and video gaming behaviors (Alzahrani et al. 2017, Sun et al. 2015).

**Participants.** This study targeted female esports players between the ages of 18 and 29 in China, a demographic identified as the primary age group within the esports community (Wong et al. 2021). A total of 31 female players with diverse gaming proficiency levels participated in this study. Appendix A displays their demographic information details. In HOK, the rankings from lowest to highest are as follows: Bronze, Silver, Gold, Platinum, Diamond, Star, King of Glory, Unrivaled King, Glorious King, and Legendary King.

Since the Chinese Online Game Fatigue System limits minors’ opportunities to participate in esports, we set the age limit for participants at 18 years old or above (The General Administration of Press and Publication of The People’s Republic of China, 2007). Additionally, engagement in esports activities within the past six months constituted a criterion for participant selection, ensuring the sample’s relevance to the contemporary esports environment.

Besides, HOK, as a mainstream mobile multiplayer online battle arena (MOBA) game, was selected for two main reasons: (1) The lack of a widely accepted and accurate definition of esports can confuse participants when trying to distinguish



**Fig. 1 The theory of planned behavior.** The model illustrates how attitudes toward esports participation, subjective norms, and perceived behavioral control influence an individual's intention to participate in esports, which in turn affects their actual participation behavior.

esports from general video games. HOK is one of the leading esports games and has been accepted by the major esports organizations and has become an official medal esports competition in the Asian Games (Asian Electronic Sports Federation, 2019). Therefore, selecting HOK can eliminate the need for distinguishing between esports players and non-players among participants and readers, and the results of the study can provide a more precise answer to our concerns regarding esports players instead of general video gamers; (2) Conventionally, MOBA games are generally dominated by male players in terms of numbers (Chen, 2016). However, as a new form of formal mobile esports game, HOK has witnessed a growing number of female players, with some studies indicating that the percentage of female players equals or even exceeds that of male players (Zhang, 2022). This is a rare occurrence in previous esports games. To explore what the underlying meanings might be, qualitative research often also seeks to select specific and unusual cases (Bodgan and Biklen, 1982). The gender ratio, as in HOK, is uncommon, and exploring the experiences of female players in HOK can provide insight into the underlying meanings of this trend and contribute to a better understanding of gender issues in esports. By comparing the results of this study with past gender research in esports, we can identify similarities and differences in the experiences of female players across different games and contexts and gain a more comprehensive understanding of these issues.

**Data collection.** Purposive sampling was adopted to identify possible target candidates to participate (Patton, 2002). There were two phrases in data collection:

- (1) To identify potential participants, we distributed an online questionnaire to collect basic information and considered four channels: (a) WeChat groups of esports clubs in colleges and universities in China; (b) Online forums of HOK; (c) Douyu TV, a famous gaming live streaming platform; and (d) Weibo, a popular social media platform in China, similar to Twitter.
- (2) Semi-structured focus group interviews were conducted with selected interviewees. Focus groups provide valuable insight into individuals' attitudes and perspectives and differences in views among various groups. The group dynamics and interactions of focus groups generate rich data and create a comfortable environment for participants to share their experiences and opinions (Rabiee, 2004). This environment fosters interaction among participants with similar characteristics, which is especially advantageous for gaining a more comprehensive and in-depth understanding of the perspectives and emotions of female participants (Krueger, 2014). We constructed our interview guide based on previous relevant research literature and the guidelines provided by Fishbein and Ajzen (Fishbein and Ajzen, 2009, Wong et al. 2021). The guide provided a flexible framework,



enabling interviewers to adapt their questions as needed during conversations while maintaining consistency across interviews. For our focus groups, we organized participants into groups of 4–6 people. This size was chosen to balance individual speaking time with dynamic group discussions, ensuring each participant could share their experiences while also fostering diverse perspectives and rich interactions. Ultimately, the study consisted of six focus groups. The interview structure was designed to elicit comprehensive responses from participants. Each interview session commenced with key inquiries pertaining to motivations for esports engagement, the rationale for selecting HOK, and comparative experiences with other esports titles. Additionally, we explored the barriers encountered within the gaming ecosystem and perceptions regarding the status of female players in this environment. Given that our participants included female players of varying ages, professions, and gaming skill levels, we posed targeted follow-up questions in subsequent interviews based on their responses and personal backgrounds, thereby capturing multifaceted perspectives. These questions and follow-up inquiries facilitated in-depth discussions, enabling us to comprehensively explore women's nuanced experiences and unique challenges in the esports field while considering their diverse backgrounds. The semi-structured interview guide used for these focus groups can be found in Appendix B. The interviews were conducted online using Zoom or Tencent Meeting due to China's epidemic prevention and control policies (Gaiser, 2008). The study did not predetermine the number of participants to be interviewed. Data saturation was reached when new data added little to what was already known, and data collection was stopped accordingly (Glaser and Strauss, 2017).

**Data analysis.** Interviews were recorded with the participant's consent, fully transcribed, and translated into English. A peer reviewer fluent in both languages checked the transcripts to ensure accuracy. The participants reviewed the transcripts before analysis to ensure authenticity and protect their interests. Deductive thematic coding was used to identify common themes (Gibbs, 2018), with NVivo 12 used to organize the data. Two investigators independently coded the data using the framework of the TPB and resolved any discrepancies through discussion and clarification. Data analysis was an ongoing cyclical process of deepening and revising our understanding.

**Assessment of quality.** Suitable participants were selected through purposive sampling to ensure the trustworthiness of this qualitative research. Triangulation, including different question formats, comparing data from various informants, member check, peer reviews, and self-reflexivity, enhanced the study's trustworthiness (Creswell and Poth, 2016). Two peer reviewers with relevant research experience provided feedback on the methodology and data interpretation. Member check gives participants access to the analyzed and interpreted data to avoid misinterpretation and personal bias. Self-reflexivity was used throughout the study to ensure conformity of the findings to the facts (Lichtman, 2012).

## Results and discussion

Previous research suggests that hostility contributes to the limited presence of women in esports (Darvin, 2020; Darvin et al. 2021). The emergence of mobile esports games like HOK has attracted more female players, raising questions about whether it indicates a turning point in overcoming gender issues in esports. However,

little research has been conducted on the experiences of female players in this new gaming environment. As esports becomes an increasingly internationally recognized competitive sport, further research and exploration are essential for its healthy development. This study examined the involvement of young women in esports using TPB behavior and explored the issue of hegemonic masculinity in esports. The study interviewed 31 female HOK players aged 18–29 and found that while public perception regarding the negative stigma and misunderstandings surrounding esports has shifted, gender bias against women still persists, and toxic gaming environments remain significant obstacles for women to participate in and enjoy a positive gaming experience in esports.

**Perceived behavioral beliefs.** Perceived behavioral beliefs are defined as an individual's assessment of the potential outcomes of participating in esports, taking into account both the beneficial and harmful effects (Ajzen, 2002, Wong et al. 2021). This determinant has significantly shaped attitudes toward esports participation among the study participants.

**Beneficial outcomes.** HOK has become an indispensable tool for socializing and maintaining emotional connections among participants. Participants report making many new friends and improving their social skills through HOK. The integration of HOK with social media platforms such as QQ and WeChat has further facilitated maintaining friendships in reality. Additionally, the popularity of HOK serves as a tool for breaking the ice and a topic of common interest, introducing new friendships in real-life social interactions. Players have expressed joy and satisfaction with the gameplay mechanics and social features of HOK. The game's art style, which caters specifically to the female audience, has proven to be a major draw for many female players, who particularly appreciate the diverse range of hero skin designs in different themes. This esthetic appeal, combined with the social and competitive elements, makes HOK a well-rounded and engaging experience for a broad audience.

*"...when we play Honor of Kings together, we chat about recent gossip and talk about our personal experiences. It has actually become another way of daily communicating with each other" (P20).*

Participants also highlighted that HOK serves as a field for achieving a sense of accomplishment and confidence. The game's structure, which includes various challenges and competitive elements, enables players to set and pursue personal goals. Many participants reported enjoying showcasing their skills in HOK, especially when leading their team to victory. This leadership role not only enhances their strategic thinking and decision-making abilities but also boosts their self-esteem. The sense of accomplishment derived from successful gameplay is highly fulfilling, and players thoroughly enjoy receiving praise and recognition from their teammates. This positive reinforcement strengthens their motivation to continue playing and improving their skills. Furthermore, the achievement and ranking systems in HOK strongly appeal to participants. These systems provide clear metrics for progress and success, which are crucial for maintaining player engagement. Advancing to a higher ranking is not just a game milestone but also a source of personal validation and fulfillment. Players feel a sense of pride and satisfaction when they see their efforts reflected in their rankings. This progression system taps into intrinsic motivations, such as the desire for mastery and competence, which are powerful drivers of sustained engagement.

*"The achievement system is super captivating, and being recognized as a top player in a province or city brings a*

*strong sense of accomplishment and satisfaction, especially with an emblem or badge. It's a constant reminder of the effort and dedication invested in the game, resulting in a sense of self-worth and fulfillment"* (P5).

For young Chinese women, HOK is more than just a source of entertainment; it is a multifaceted tool that supports mental well-being, fosters social connections, and provides a platform for personal achievement and confidence building. This blend of benefits makes HOK an indispensable part of many players' lives, contributing to their overall well-being and satisfaction.

**Deleterious outcomes.** Participants expressed their enjoyment of HOK and frequently played the game, but they also voiced concerns about potential negative outcomes. The primary concerns included time cost and addiction, emotional interference, and possible harm to physical health. The time cost is frequently cited as one of the primary negative consequences of participating in the game. Enhancing gaming skills typically necessitates substantial time investment and rigorous training. Players are concerned that the excessive time dedicated to gaming may encroach upon their real-life activities, such as work, studies, and social interactions. This encroachment can lead to a neglect of responsibilities and a decrease in overall productivity. Additionally, some players are apprehensive about the possibility of gaming addiction and its adverse effects, such as the inability to control gaming habits and the potential for it to interfere with daily life. However, effective time management is perceived as a viable solution to this issue, allowing players to regard gaming as a regular hobby without it becoming overwhelming.

*"When I had an important study or work task at hand, I used to uninstall Honor of Kings from my device. Once I have a bit of free time, I download it again. I have managed to maintain control over my time and have a good handle on when and how much I play"* (P20).

When players mention the emotional interference that HOK can have on them, many other players express agreement and resonance with their experiences. To summarize, emotional distress mainly comes from two main sources: the frequent toxic behavior in the game, especially offensive and insulting language directed at women, and the frustration of losing multiple matches in a row. Toxic behavior is a broad term that encompasses various negative behaviors, such as harassment, grieving, and cheating, that are becoming increasingly problematic in the gaming community (Adinolf and Turkay, 2018; Kwak et al. 2015).

P3 said, *"I really get affected...I even end up crying and feeling very upset. Gaming used to make me happy, but encountering certain individuals can really ruin the experience...there are times when players will say offensive things or single me out for no reason..."*. P17 said, *"...they will realize that you are a female player and may use insulting language or refuse to play with you...because they think girls play badly..."*.

Another specific concern regarding HOK lies in its nature as a digital game. As HOK is a mobile platform-based game, the smaller screen size raises players' concerns regarding the potential impact on their vision and eye fatigue, which could lead to conditions such as dry eye syndrome or myopia. Prolonged screen time, especially on small devices, can strain the eyes and cause discomfort. Furthermore, the use of mobile devices for gaming reduces constraints related to time and location. Many players report engaging in gameplay during late hours and while lying down, which exacerbates these health concerns. Poor

posture and inadequate lighting during these sessions can further contribute to physical discomfort and long-term health issues.

*"Most of my gaming happens at night, which often leads to staying up late. I'm particularly concerned about the impact on my eyesight - that's what worries me the most..."* (P28).

Participants' health concerns about esports participation reflect a historically negative correlation between esports and health outcomes. While earlier studies primarily emphasized the negative health impacts of esports participation (Yin et al. 2020, Chan et al. 2022), often comparing it to "electronic heroin" in the Chinese context (Cao and He, 2021), recent empirical evidence suggests a more nuanced understanding. Research has begun to distinguish casual esports participation from professional gaming injuries, demonstrating that regular esports engagement is not necessarily associated with unhealthy lifestyles (Monteiro Pereira et al. 2022, Tang et al. 2023a). Moreover, emerging studies highlight potential positive correlations between esports and psychological well-being, including stress reduction and enhanced social connections (Happonen and Minashkina, 2019). This shifting empirical landscape has contributed to a gradual transformation of esports' social image.

**Normative beliefs.** Normative beliefs refer to social pressures and norms that influence an individual's decision to participate in esports. These pressures may stem from significant people in their lives or groups with which they identify. The opinions of these influential individuals or groups can significantly impact the individual's decision-making process (Ajzen, 2002; Wong et al. 2021) and are thus an essential determinant of esports participation. To promote inclusivity and diversity in esports communities, normative beliefs should be considered.

Based on participant interviews, our findings reveal how women's engagement in esports activities is interwoven with multilayered social perceptions and attitudes. The narratives illuminate how perspectives from family members, peer groups, educational institutions, and broader society intersect to shape participants' experiences and decisions regarding esports participation. These social influences manifest in nuanced ways across different contexts, creating complex patterns of engagement that reflect broader social and cultural dynamics.

**Academic attainment and dispelling stigma.** Previous research has shown that parents often have a negative attitude towards esports due to concerns about its impact on their children's academic performance and health (Wong et al. 2021). In China, esports was once regarded as "electronic heroin" and was not treated as a formal sport in schools and families (Cao and He, 2021). China's cultural emphasis on hard work and academic achievement, deeply rooted in Confucian values, has traditionally driven society to prioritize education as a pathway to success. However, the rise of esports, particularly games like HOK, presents a challenge to these values, creating a cultural tension that affects the younger generation's attitudes and behaviors. Decades after the public criticism and parental outcry against arcade and console games, parents are again voicing their concerns regarding popular esports culture (Cao and He, 2021). They have been joined by an increasing number of educationists, doctors, and social critics. However, recent years have witnessed the rapid growth and maturation of the esports industry, accompanied by a significant shift in both academic and societal perceptions. Media coverage has increasingly highlighted the positive aspects of the esports industry, while scholarly research has begun to explore the benefits and positive implications of esports participation. This evolving narrative corresponds with increased acceptance of

esports as a legitimate digital practice among younger generations and their parents. Research findings indicate that parents generally exhibited neutral or supportive attitudes toward their children's esports participation, provided that effective time management was maintained.

*"My mother is supportive of my gaming habits. I even invite her to join me sometimes, although she always struggles with the games..." (P21).*

However, a minority of parents still hold opposing views.

*"I dare not play any game at home. My parents believe that girls should not play games. That is something for boys to play...it is harmful as long as it is an electronic game..." (P31).*

Our examination of parental perspectives reveals an emerging landscape where attitudes toward gaming increasingly diverge along gender lines. Through detailed analysis of participant narratives, we uncovered how societal pressures and cultural norms surrounding gender roles fundamentally shape female participation in esports. These findings provide rich insights into the ways in which gender-based social expectations continue to influence women's engagement with digital gaming cultures.

Besides parents, others representing mainstream sociocultural norms, such as authoritative roles with teachers and peers, also affect players' perceptions of their involvement in HOK. Although most students reported that teachers do not express support or opposition towards esports participation, this may be because this study only involved female players over 18, and the teacher-student relationship may be different for underage players. The relationship between underage players and gaming participation may be more complex, influenced by factors such as academic pressure, national policies on underage gaming, and the physical development of youth. Regarding institutional policy development concerning esports activities, participants consistently reported that universities demonstrate an overall positive stance toward esports engagement.

*"The university organized various esports competitions and does not restrict the participant's rank or gender... the school also establishes esports club for interested students..." (P18).*

Peer pressure was found to differ from previous studies. Unlike earlier evidence, this study did not discover significant peer support for esports participation (Wong et al. 2021). Most participants believe their peers neither support nor oppose their involvement in esports. However, some players reported feeling internal pressure and social comparison. They felt that playing games more than their peers led to guilt about balancing mainstream academic achievement and gaming. This internal conflict highlights the struggle many players face in reconciling their passion for esports with societal expectations and academic responsibilities. The pressure to conform to traditional academic and social norms can create a sense of isolation for those deeply involved in gaming, further complicating their emotional and psychological well-being with the HOK.

*"My peers didn't affect my participation, but the negative reputation and peer pressure around esports made me feel ashamed and afraid to participate. Compared to my dormmates who don't play games, I feel like playing games means I'm not working hard enough, giving me a sense of guilt. I worry they'll look down on me for playing" (P9).*

Beyond the attitude from peers, parents, and teachers, recent national policies supporting esports and its recognition as an official sport in multiple countries have updated the public's perception of esports (Weiss, 2008). For example, esports has

been an official medal event at the 2023 Asian Games, introducing more people to esports as a sport. In addition, professional esports players are receiving more media attention, and collegiate esports is becoming increasingly valued, with over 200 schools providing varsity support in 2018, amounting to nearly \$15 million in scholarships (Scott et al. 2022, Kauwelo and Winter, 2019). Furthermore, some Chinese universities now offer majors in esports, indicating the growing academic recognition of esports as a legitimate field of study. Policy changes and promotion of esports by countries and universities may have played a crucial role in changing the public's perception and understanding of esports.

The study indicates a shift in public attitudes toward esports, as reflected in the attitudes of parents, schools, and peers toward participants' involvement in esports. Despite some parents still holding negative views on gaming, this is infrequent in the study. However, participants may feel a sense of guilt due to the negative reputation of esports in the past, particularly when playing games around non-gamers. Societal norms and perceptions can influence the attitudes and opinions of parents and educators regarding specific activities, such as participation in the sports industry, as shown in previous studies (Wong, 2017). Reducing the negative image of esports can positively impact participation in esports and the industry.

**Career choice.** The coexistence of academic attainment significantly influences individuals' decisions regarding future participation in esports. Within our study, players expressed that while they consider esports as a potential career choice, this path is fraught with challenges. These challenges stem from familial expectations and the current status of the esports industry in China, making it a difficult role to pursue. In China, sociocultural expectations around career choices are deeply influenced by traditional values that emphasize stability, respectability, and family honor. Careers in fields such as medicine, engineering, and finance are often seen as prestigious and secure, aligning with the collective cultural emphasis on achieving social status and economic stability (Tao et al. 2018). These expectations are rooted in Confucian ideals, which prioritize education, hard work, and filial piety (Creed et al. 2009). However, the rise of the esports industry presents a significant shift in these traditional career paradigms. Esports, once viewed as a frivolous pastime, has gained substantial legitimacy and prestige, particularly among younger generations. This shift is partly due to the economic success of the industry, which has created lucrative career opportunities not only for players but also for professionals in management, marketing, and content creation (Sun et al. 2024). The Chinese government's support and recognition of esports as an official sport have further bolstered its respectability (Akosah-Twumasi et al. 2018).

Despite these advancements, pursuing a career in esports can still encounter resistance from older generations, who may view it as less stable or respectable compared to traditional careers. This generational divide highlights the ongoing negotiation between modern career aspirations and conventional cultural values. Young people passionate about esports often need to balance their personal interests with familial expectations, navigating a complex landscape of societal norms and emerging opportunities.

*"Despite everything, my parents still hold onto this traditional view that girls should stick to 'proper' careers like teaching or civil service"(P22).*

The tension between traditional career paths and emerging opportunities in esports is not unique to China but is a global phenomenon. However, the intensity of this conflict is particularly pronounced in China due to the strong influence of



Confucian values. These values emphasize not only academic excellence but also the importance of contributing to family honor and societal stability (Yuen, 2020). Moreover, the rapid growth of the esports industry has created a dynamic and competitive environment. Aspiring female esports professionals must not only excel in their gaming skills but also navigate the business and marketing aspects of the industry. This multifaceted challenge requires a diverse skill set that combines technical proficiency with strategic thinking and adaptability. Under this unique pressure, young women often find themselves balancing the expectations of the mainstream with the allure of esports, leading to stress and internal conflict. While some view esports as a legitimate career path, others see it as a distraction from more traditional pursuits, influenced by parental and societal pressure to excel academically. The pressure to excel academically while pursuing a passion for esports can create significant emotional and psychological challenges. This dual pursuit requires resilience and strategic planning as individuals strive to meet both their personal goals and the expectations of their families and society.

**Gendered game.** HOK, much like traditional sports and PC esports, remains a gendered domain. Despite increasing female participation, traditional social perceptions of feminine images and roles continue to shape the gaming sphere. This influence often manifests during hero selection, team decision-making, and the evaluation of female players' gaming skills. Female players frequently report being "naturally" assigned to female characters by male players or relegated to subordinate roles.

*"Boys often say that girls should only play certain positions, such as mid-lane or support, which confuses me. I am unsure if the game is designed that way or if boys limit girls' choices. This thinking makes me unsure of my own preferences and whether I am comfortable with the limits set by others, although I know I am capable of playing in multiple positions"* (P5).

This reflects that, despite the growing number of female players, the field of esports, particularly HOK, is still influenced by patriarchal sociocultural beliefs and value systems. Feminist theorists have previously highlighted how these gendered dynamics are rooted in broader societal structures that perpetuate male dominance and female subordination. The concept of "hegemonic masculinity" explains how certain masculine traits are valued over others, reinforcing gender hierarchies within gaming communities (Scidone et al. 2024). According to Butler's theory on gender performativity, women's gender is not an inherent identity but rather a series of actions and behaviors that are socially constructed and reinforced (Piggott and Tjønndal, 2024). In the context of esports, female players are often pressured to conform to traditional gender roles, both in their choice of characters and their in-game behavior. This performative aspect of gender can lead to internal conflicts as female players struggle to assert their identities within a male-dominated space.

*"I was particularly resistant to playing 'support' because they always said, 'You're a girl, so you should play support'"* (P23).

*"I even feel confused whether I want to play these roles myself, or if I have become comfortable with the limits set by others"* (P5).

Furthermore, this gendered situation extends beyond female players' performance to impact their personal lives and identities. Gender stereotypes in esports create an environment where female players often feel increased pressure to win and maintain a

high level of competition. This pressure stems from the pervasive belief that women are less skilled or serious about gaming compared to their male counterparts (Peng, 2021). As a result, female players frequently experience self-doubt and a lack of confidence in their abilities, which can negatively affect their performance and overall gaming experience.

Interviews reveal that some male players openly express discriminatory views about the skills of female players solely based on their gender. This bias is not only demoralizing but also reinforces the stereotype that women are inherently less capable in competitive gaming. Such attitudes contribute to a hostile environment where female players must constantly prove their worth, leading to significant emotional and psychological stress.

*"When some male players notice that I'm a girl or using a feminine hero skin, they always say things like 'Let's surrender. It's a girl playing'"* (P14).

*"...when you achieve a high rank through your own efforts or perform well in a match, some male players will make fun of you and say things like, 'Who carried you to this rank?' or 'Was it your boyfriend playing for you just now?'"* (P19).

Beyond the gender issues embedded and happening within the HOK, the esports industry also poses difficulties for young women players. Many participants from the interviews indicated aspiration to work in the esports industry, which motivates them to spend more time learning and mastering games like HOK. However, they also express concerns about the challenges and barriers women face in obtaining employment in the esports industry. The overwhelming male dominance in the esports industry makes it more challenging and discouraging for women who want to join and pursue a career. Women are significantly underrepresented in top-tier esports teams and leadership roles within esports organizations. This lack of visibility and role models makes it difficult for aspiring female players to envision a successful career path in the industry. The absence of female mentors and leaders perpetuates the cycle of gender inequality. Research indicates that women constitute only a small fraction of professional esports players and even fewer in leadership positions (Luo and Chen, 2024). This underrepresentation is partly due to the historical and cultural biases that have long associated gaming with masculinity (Peng, 2021). Without visible role models, young women may struggle to see themselves succeeding in esports, which can discourage them from pursuing careers in this field (Ruvalcaba et al. 2018). Efforts to increase female representation, such as all-female teams and mentorship programs, are crucial in breaking this cycle and fostering a more inclusive environment (Andrews and Crawford, 2021).

*"Female players are rarely seen in professional esports tournaments. While Honor of Kings has a professional league for women, it's not as widely promoted or valued as men's leagues. If a professional esports team added a female player, people would scrutinize her skills and magnify her mistakes, making it even more difficult for women to enter the industry"* (P22).

**Perceived behavioral control.** Perceived behavioral control refers to an individual's belief about their ability to perform a particular behavior under specific circumstances. It reflects an individual's belief about the factors that may either facilitate or impede their performance in esports (Ajzen, 2002, Wong et al. 2021).

**Capability and resource constraints.** High-level esports competitions necessitate exceptional physical coordination and cognitive



abilities, which require years of specialized training. This study found that the perceived difficulty of achieving such proficiency can deter potential female players. The belief that one lacks the necessary skills and talent, often exacerbated by age-related constraints, significantly impacts their perceived behavioral control. This aligns with previous research indicating that self-efficacy, or the belief in one's ability to succeed, is crucial in determining participation in challenging activities (Bandura, 2010). Therefore, initiatives aimed at enhancing skill development and providing supportive training environments could improve self-efficacy and encourage greater female participation in esports.

*"...the level of skills and training required for competitive esports feels overwhelming. I don't think I can reach that level..." (P9).*

The technical demands of esports, particularly the need for a smooth and reliable network connection, present another barrier. Despite HOK's lower device requirements compared to computer games, its fast-paced nature requires optimal network conditions, which many female participants reported as lacking in their schools. Additionally, the economic burden of frequent device upgrades and increasing storage needs further diminishes perceived behavioral control. These findings suggest that improving infrastructure and providing financial support for necessary equipment could alleviate these barriers, thereby enhancing participation rates.

The study also revealed that life pressures, such as academic and work commitments, significantly impact female participants' ability to engage in esports. The need for sustained training and constant updates to game strategies requires a substantial time investment, which is often incompatible with the high-intensity demands of studying and working. This time constraint reduces perceived behavioral control, as participants feel unable to balance their responsibilities effectively. Addressing this issue may involve promoting time management strategies and creating more flexible training schedules to accommodate the diverse needs of female players.

*"I struggle to balance gaming with my studies and daily responsibilities. It's difficult to find time when I can fully focus on gaming without feeling pressured by other commitments" (P22).*

**Toxic environment.** Many female players express dissatisfaction with toxic behavior in games, which greatly affects their emotions, game experience, and performance. Due to the anonymity of the internet, uncivilized behavior online has become common and easy, and players do not have to take responsibility for their language and behavior.

*"Toxic teammates who use offensive language or behave in a way that's unpleasant are common in the game. It can make players feel disgusted with the game" (P3).*

*"Sometimes it can be really frustrating when you come across teammates who constantly blame each other for small issues. It's like a never-ending cycle of finger-pointing...it just makes me want to end the game quickly" (P19).*

In virtual environments, individuals may lack the necessary social cues, leading to a sense of anonymity and, subsequently, deindividuation or a loss of self-awareness (Lea and Spears, 1991). Verbal bullying and insults are easy to perpetrate and less accountable on the internet, leading to an increased likelihood of harassment during gameplay due to online anonymity.

Some articles suggest that violent game content, such as in MOBA games involving killing and destruction or shooting

games simulating real firearms and shooting, contributes to the aggressive and violent gaming atmosphere (Tang and Fox, 2016; Anderson and Bushman, 2001; Anderson and Carnagey, 2009; Anderson et al. 2010). Furthermore, the highly competitive nature of these games, which is designed to keep players engaged through challenging play, also contributes to the development of this violent and hostile environment (Adachi and Willoughby, 2011). In fact, similar to traditional sports, frequent incidents of verbal insults and uncivilized behavior are often observed, and aggression is regarded as an essential coordination of sport in the competitive sports context (Oproiu, 2013; Sipes, 1973). In some competitive sports, interpersonal aggression is often met with approval within the sport and a general tolerance in society. The arousal of states such as guilt, anxiety, and evaluation apprehension may not occur in certain sports because of the aggressive behaviors (Russell, 1983). Many studies have indicated that participation in competitive sports itself is associated with violence and aggression (Eisman et al. 2018; Miller et al. 2006). As with traditional sports, it requires the joint efforts of society and guidance on quality education to build a better esports environment and atmosphere (Kerr, 1999; Fasting et al. 2014).

Game operators and national policies have implemented measures to address toxic gaming environments and online harassment, including real-time IP address display and built-in AI detection systems that can identify and punish players who exhibit toxic behavior. HOK also offers one-click quick replies and text prompts to facilitate more friendly and civilized language and optimize the online environment. However, the interviewee reported that despite the reporting feature, they faced difficulties in getting players with toxic behavior punished. Further research is needed to evaluate the effectiveness of these measures to improve the online environment and enhance user experience.

This study's identification of key themes provides valuable theoretical contributions to esports management. These themes shed light on the obstacles, experiences, and potential growth in the esports industry, particularly with regard to young women's participation and experience in esports. The study highlights the need for greater diversity and inclusion in the industry and recognizes the potential for esports to attract a wider audience.

**Enduring bias toward women.** Despite attempts to appeal to female audiences and players through art styles, increased social interaction, and lower device requirements in HOK, these efforts seem to have not succeeded in eradicating certain biases against women that remain prevalent within the male player population. Although the majority of female participants expressed both a willingness to participate in esports games and a desire to become involved in the esports industry, they face persistent gender-based discrimination that reveals the limitations of surface-level inclusivity efforts.

This discrimination manifests through a distinct form of "geek masculinity" that operates differently in digital spaces. While geek masculinity initially expresses itself through technical expertise and gaming mastery, it transforms dramatically when confronting female players. While geek masculinity initially expresses itself through technical expertise and gaming mastery, it transforms dramatically when confronting female players. Paradoxically, geeks—who are often perceived as outside the conventional male power structures—continue to enforce rigid gender boundaries through technical expertise (Dunbar-Hester, 2008). This manifestation operates through three critical dimensions: technical gatekeeping, which establishes technical prowess as inherently masculine (Wajcman, 2010); identity recognition shift, where interactions rapidly transform from merit-based evaluation to gender-based exclusion when female identity is revealed; and dual oppression, combining technical discrimination with gender harassment to create unique barriers for female players.

These mechanisms become particularly powerful in digital spaces where anonymity eliminates traditional social constraints (Tang and Fox, 2016), as evidenced by participants' experiences.

*"The moment they realize I'm female, the conversation stops being about the game. some of them may start making crude and vulgar jokes, which makes me really uncomfortable... some male players may use insulting or sexually harassing language in their ID... I don't dare to use voice chat because I don't want them to discover I'm a woman" (P18).*

The intersection of gaming culture's existing toxicity with gender bias creates a uniquely hostile environment (Gray, 2012). Rather than physical intimidation, geek masculinity weaponizes technical knowledge and gaming expertise to establish dominance while simultaneously deploying traditional forms of gender-based harassment.

*"...the harassment isn't just about skill anymore - it becomes more personal and targeted when they know you're female" (P21).*

*"When I reach high ranks, they question who helped me get there. When I buy beautiful skins, they mock me, asking which man bought them for me" (P3).*

Within the gaming world, women are frequently perceived as subordinate to their male counterparts, and their marginalization is manifested through derogatory and mocking language (Darvin et al. 2021). This treatment—comprising suppression, ridicule, and harassment of women—serves as a method for men to display their masculinity to peers within the gaming environment, aligning with the broader societal patterns of hegemonic masculinity (Taylor, 2012).

Against this backdrop of digital masculinity and systemic bias, female players' responses reveal how geek masculinity shapes both their gaming experiences and resistance strategies. When encountering female players, geek masculinity manifests through dual mechanisms - technical gatekeeping and gender-based harassment - creating unique barriers that women must constantly navigate. Women actively resist these constraints through multiple channels, though the burden of constantly proving their legitimacy creates additional barriers to participation. Their resistance strategies directly challenge the technical gatekeeping aspect of geek masculinity.

*"I strongly resist playing support roles in games because male players assume women should play support due to inferior skills. Instead, I deliberately practice jungle positions - core roles that require high skill. Every time I play, I want to prove to them that I'm a female player who can jungle better than they can" (P23).*

This testimony illuminates how technical skill in gaming becomes a contested terrain for gender identity (Chess and Shaw, 2015). The assumption that women should play support roles reflects deeper beliefs about gender and competence - beliefs that position technical mastery as inherently masculine while relegating women to supportive, secondary positions. By deliberately mastering jungle positions, female players challenge not just individual prejudices but the entire framework that links technical prowess with masculine identity.

The presence of other female players creates moments of solidarity and mutual support that hint at the potential for positive change. As one participant noted, *"If there are other female players in the team, they always stand up for me and help stop those toxic male players. I feel that having more women participate in this game would make the gaming environment better" (P27).* This collective resistance suggests that increased

female presence could disrupt the homogeneous male environments where geek masculinity traditionally flourishes.

These experiences reveal how gender bias, rather than skill or interest, remains the fundamental barrier to female participation in competitive gaming (Salter and Blodgett, 2012). Despite corporate attempts at inclusion, the persistence of toxic behavior and geek masculinity continues to impose additional burdens on female players who simply wish to compete and improve at the game. However, the emergence of female solidarity and mutual support suggests that increased female participation could be key to transforming gaming culture from within.

Women and other minority groups are often targeted with attacks, which not only harms the victims but also the esports ecosystem. It creates an unwelcoming environment for women, hindering their participation and professional development and limiting industry diversity and inclusivity. To address gender bias in esports, essential steps include achieving gender equality, implementing anti-gender harassment policies, providing education and training, increasing women's representation and participation, and giving them a voice. To enhance women's participation, suggested methods include early exposure, access to career insights, funding for education and training, and sponsorship programs within esports organizations (Darvin et al. 2019).

### Limitation

Firstly, online interviews may lead to losing qualitative research data due to difficulty observing nonverbal cues and personal connections. Secondly, this study focuses only on players in China and excludes female gamers under 18 (due to regulations), which may limit the study's findings. Targeted research is needed for players aged 15–18, who are an essential group of participants worldwide. Thirdly, the scarcity of world-class female professional players in China limits the research team's interaction with such participants, but their professional environment may reflect their different experiences and perspectives. Further research on professional female players can help consolidate research findings.

### Conclusion

In conclusion, HOK emerged as a significant conduit for female engagement in esports, facilitated by its integration with popular social media platforms and its appeal to female esthetics within the game design. While HOK broadened the entryway for women into esports, contributing to heightened participation and interest, persistent gender biases and a toxic online environment continued to mar the inclusive potential of esports. The development of esports in China reveals a fundamental tension between traditional cultural values and digital transformation. The pervasive masculine gaming culture manifests in systematic online harassment and gender discrimination, creating substantial barriers to female participation. The industry's professional and leadership domains remain disproportionately male-dominated, reinforcing systemic gender inequities and perpetuating stereotypical assumptions about female players' capabilities and potential. Additionally, the sedentary nature of esports participation presents health-related concerns that necessitate preventive strategies and wellness-oriented gaming protocols. Additionally, potential health risks associated with prolonged sedentary in esports necessitated the development of preventive strategies and health-conscious gaming practices. The evolution of esports into a more inclusive domain requires addressing these gender disparities through concerted efforts across policy implementation, industry practices, and cultural shifts. This includes establishing anti-harassment protocols, increasing female representation in professional competitions and

management positions, and developing evidence-based strategies for health-conscious gaming practices. Future research should evaluate the effectiveness of gender equality initiatives while exploring practices that balance traditional values with digital innovation in the Chinese cultural context. The transformation of esports into an equitable space demands collaborative efforts from educational institutions, families, and society at large, working collectively to create an inclusive environment while preserving traditional cultural values.

### Data availability

The complete datasets generated and/or analyzed during this study are not publicly available due to privacy protection regulations concerning participants' personal information but are available from the corresponding author upon reasonable request with appropriate data protection agreements in place.

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## Author contributions

TANG Di: Conceptualization, formal analysis, funding acquisition, investigation, methodology, project administration, writing—original draft, writing—review and editing; PENG Bo: Formal analysis, writing—original draft, writing—review and editing; MA Ruisi: Investigation, and writing—review and editing; SUM Kim-wai Raymond: Project administration, writing—review and editing, supervision.

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## Competing interests

The authors declare no competing interest.

## Ethical approval

This study was approved by The Survey and Behavioral Research Ethics Committee of The Chinese University of Hong Kong on June 26, 2023 (Reference No. SBRE-22-0775). All procedures adhered to the tenets of the Declaration of Helsinki.

## Informed consent

Written informed consent was obtained from all participants before their participation. The scope of consent encompassed study participation, data collection and analysis, and potential publication of anonymized findings. All participants were informed of the principles of voluntary participation, anonymity, and privacy protection.

## Additional information

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**Correspondence** and requests for materials should be addressed to Kim-wai Raymond Sum.

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